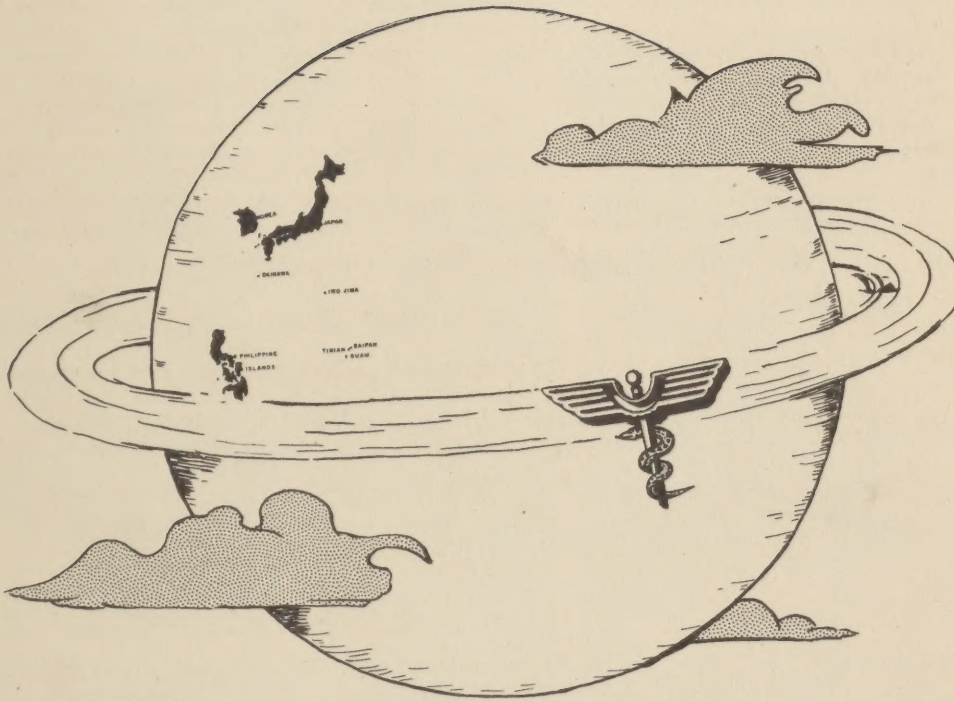


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MED SEC GHQ FEC

VOL V NO 10
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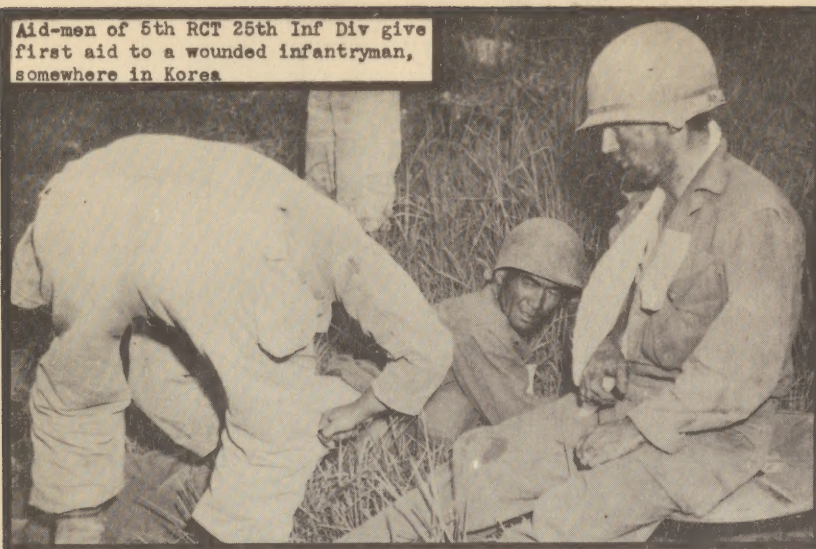
ARMY
MEDICAL
NOV. 17 1950

A FAR EAST PERIODICAL OF MEDICAL DEPARTMENT INFORMATION

SURGEON'S CIRCULAR LETTER

RESTRICTED

Aid-men of 5th RCT 25th Inf Div give first aid to a wounded infantryman, somewhere in Korea



SK civilian volunteers help evacuate American casualties, Haktong-Ni area, Korea

Wounded NK PW on "A" frame being evacuated to rear, Sam Koli, Korea



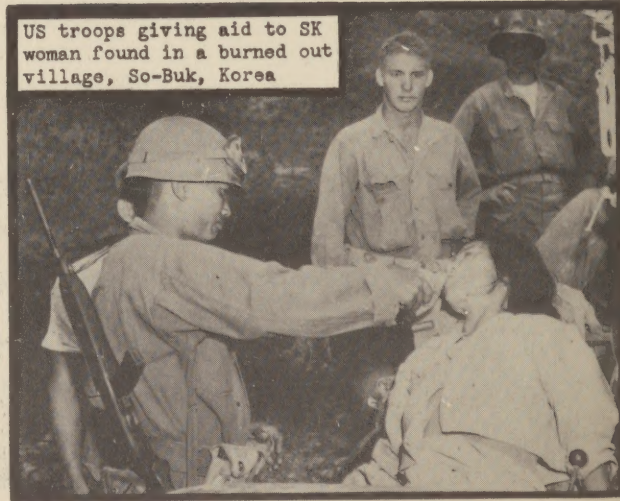
MEDICAL SERVICE IN KOREA

NK prisoners being dusted with DDT at PW enclosure - Korea



Medics evacuate casualties of 5th RCT wounded in Chuk Chon mountain, Masan area, Korea

US troops giving aid to SK woman found in a burned out village, So-Buk, Korea



GENERAL HEADQUARTERS
FAR EAST COMMAND
MEDICAL SECTION

SURGEON'S CIRCULAR LETTER

APO 500

NO.10

1 October 1950

PART I

ADMINISTRATIVE

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I. Organization of the Medical Section

Arrivals in the Medical Section, GHQ, FEC:

Colonel Oral B. Bolibaugh, MC, has assumed the duty of Orthopedic Consultant to the Chief Surgeon, Far East Command.

Colonel Albert J. Glass, MC, has assumed the duty of Neuropsychiatry Consultant to the Chief Surgeon, Far East Command.

II. The Surgeon General of the Army in the FEC

Major General Raymond W. Bliss, The Surgeon General of the Army, accompanied by Col. Laurence A. Potter, MC, of the Medical Plans and Operations Division of The Surgeon General's Office, arrived in Tokyo 14 September 1950. General Bliss previously visited medical installations in the Far East Command during 1947.

General Bliss has a record of more than 36 years of military service. He was born in Chelsea, Massachusetts. He was graduated from Tufts Medical College in 1910, entered on active duty in the Medical Corps, U. S. Army, as 1st Lieutenant in 1911 and advanced through grades to that of Major General in 1943. General Bliss was appointed Deputy Surgeon General in 1946 and in 1947 assumed the duties of The Surgeon General of the Army.

General Bliss's tour in the Far East will include conferences in the Chief Surgeon's Office, GHQ, and visits to medical facilities throughout Japan and Korea. A report of General Bliss's tour will appear in a subsequent issue of the Surgeon's Circular Letter.

III. Medical Expert Consultant Visits Far East Command

Dr. Garfield G. Duncan, Expert Consultant to The Surgeon General, arrived in the Far East Command recently for an inspection trip of medical installations. The purpose of his visit which will

be for a period of approximately 30 days is to promote and further improve the quality of medical treatment being rendered in Army medical installations.

IV. Report QMD-21 Authorized

During the present emergency in Korea, a "Report of Admissions to US Army Hospitals of Patients with Diagnosis Self-Inflicted Wounds - Circumstances Undetermined (RCS QMD-21)" has been authorized. This report is required to establish line-of-duty status of patients admitted to US Army Hospitals with diagnosis of "Self-Inflicted Wounds - Circumstances Undetermined" and is to be submitted to the Medical Section, GHQ, FEC, the 10th, 20th and last day of each month. (REF: CINCFE message CX 62433, 8 Sep 50)

V. Awards to Army Medical Service Personnel



The following additional Army Medical Service personnel have been awarded the Silver and Bronze Star Medals for exceptional bravery in face of the enemy and meritorious service in the Korean situation. The Distinguished Service Cross has been awarded posthumously to Cpl Jack Bolen and Pfc Ronald R. Dusek.

Capt James B. Hutchinson, MC, SS
 Capt Robert M. Moore, Jr., MC, SS (Posthumously)
 2d Lt Francis A. Curtin, MSC, SS
 2d Lt Trevor J. Perry, MSC
 M/Sgt William D. Lane, Jr., AMS, SS
 Sgt 1/c John O. Sorick, AMS, SS
 Cpl Cletus Biederstadt, AMS, SS
 Cpl Harland L. Guenzel, AMS, SS
 Cpl Theo H. Lee, AMS, SS
 Pfc Walter Brown, AMS, SS
 Pfc Clyde Cunningtubby, AMS, SS
 Pfc Omer A. Dube, AMS, SS
 Pfc Samuel E. Eaton, AMS, SS
 Pfc Robert P. Eppert, AMS, SS
 Pfc Roy L. Medina, AMS, SS
 Pfc Gerald Millman, AMS, SS
 Major Wade F. Heritage, MC, BSM
 Capt Hector D. Garcia, MSC, BSM
 Capt Wallace L. Lancaster, DC, BSM
 Capt Benjamin G. Musser, MC, BSM
 Capt Donald E. Sandstrom, MSC, BSM
 Sgt 1/c Daniel Cavanaugh, AMS, BSM
 Sgt William A. Check, AMS, BSM
 Sgt Warren C. Shutter, AMS, BSM
 Cpl Richard J. Drapeau, AMS, BSM

Cpl Roy E. Everts, AMS, BSM
 Cpl Carl T. Farmhal, AMS, BSM
 Cpl Henry N. Hopper, AMS, BSM
 Cpl Billy E. O'Bryant, AMS, BSM
 Cpl Francis A. Olson, AMS, BSM
 Cpl Raymond D. Peters, AMS, BSM
 Cpl Harold J. Schmitz, AMS, BSM
 Cpl Sigifredo Sepulevena, AMS, BSM
 Cpl O. D. Shifflett, AMS, BSM
 Cpl Donald E. Tennier, AMS, BSM
 Pfc William V. Bradley, AMS, BSM
 Pfc Louis Defelippi, AMS, BSM
 Pfc Earl F. Dufresne, Jr., AMS, BSM
 Pfc Donald L. Eisenhardt, AMS, BSM
 Pfc Harold D. Jenkins, AMS, BSM
 Pfc John L. Kinney, AMS, BSM
 Pfc Gerald Lovella, AMS, BSM
 Pfc Junior B. Lowe, AMS, BSM
 Pfc Marshall L. McPherson, AMS, BSM
 Pfc Jose Vasquez, AMS, BSM
 Pfc Billy S. Watford, AMS, BSM
 Pfc Wallace E. Williams, AMS, BSM
 Pvt Raymond G. Ellis, AMS, BSM
 Pvt Jack R. Mason, AMS, BSM

VI. Change in Reporting Patient's Evacuation Requirements, RCS CSGSP-29 (R-2)

1. Reference to letter GHQ FEC, AG 510 (4 Nov 48)GA, subj: Surface Requirements Report, RCS CSGSP-29 (R-2) 4 Nov 48.

2. Ltr GHQ FEC, AG 510 (4 Nov 48)GA, subj: Surface Requirements Report, RCS CSGSP-29 (R-2) 12 Jun 50, amended the above reference letter as follows:

a. Paragraph 6e of Inclosure I (Instructions for Submission of Surface Requirements Report) is rescinded and the following substituted:

"e. Part V. Patient's Evacuation Requirements. This part of report will be submitted to this headquarters in two sections:

"(1) Section I - to include backlog (total number of Army, Air Force and civilian patients awaiting evacuation) and evacuation requirements (four months forecast for Army and civilian personnel only), six (6) copies to be forwarded by each command.

"(2) Section II - to include Air Force personnel (excluding Army and civilians) one copy to be forwarded."

b. Appendix B (report form) to Inclosure I is rescinded and the attached Appendix B (Sections I and II report form) is submitted therefor.

3. General Instructions for Submission of Part V, Patient Evacuation Requirements.

- a. Classification - Restricted, unless a higher classification is necessary.
- b. Frequency and Due Dates. This report will be submitted monthly to reach CINCPAC on the 18th of each month.
- c. Content. This report is a forecast of surface and air evacuation requirements projected for a four (4) month period.
- d. Responsibility. CG JLCOM, PHILCOM(AF), MARBO and RYCOM.

4. Detail Instructions

- a. Backlog. The backlog will be considered to include those who are physically available for processing or shipment, and who had been reported previously, but who will not have been evacuated by the end of the month.
- b. Space Requirement. The patient evacuation requirements will be projected to cover a four month period beginning with the month following the backlog.
- c. Subject Report. The Subject Report is submitted in columnar arrangement to show requirements by sex under each heading. The surface and air requirements by classes will be listed separately under each heading.

VII. Nurse Corps Board

A board to evaluate applicants for Regular Army commissions in the Nurse Corps has been established at the Army Medical Center, Washington, D.C. Colonel Robert E. Blount, MC, former Medical Consultant, Far East Command, is president of the board.

VIII. Conference Held on Medical Equipment

Military and civilian medical and dental men of the United States, United Kingdom and Canada met in Montreal recently in a seven-day conference at which field medical and dental equipment for the armed forces of the three countries were discussed. Subjects taken up at the meeting, the sixth of its kind, included Arctic clothing at sea, medical equipment in the Arctic, Arctic survival, pharmaceutical supply units, field surgical units, field dental units, field malaria and epidemic control units, and field veterinary units. Panels also considered radiographic and laboratory work and antiseptics.

IX. Officers Train at Medical Center

Six dental school graduates have reported to the Army Medical Center, Washington, D.C., to begin a one year's dental internship at Walter Reed General Hospital.

Six officers of the Women's Medical Specialist Corps, who have been students at the Army Medical Field Service School, San Antonio, Texas, have begun a 17-week course in physical therapy at the Army Medical Center.

X. Dental Study-Slides

The Dental Section of the Armed Forces Institute of Pathology has completed 50 study sets of microscopic slides on oral diseases and tumors. They will be displayed as part of the Army Dental Corps exhibit at the meeting of the American Dental Association in Atlantic City, N.Y., 30 October to 3 November 1950.

XI. Veterinary Medicine Course at Army Medical Center

A new 17-week course in veterinary medicine, advanced, began on 28 August 1950 at the Army Medical Center, Washington, D.C. The purpose of the course is to train selected officers in the accepted methods of preventive veterinary methods and animal pathology. The class is composed of eight Army officers and four Air Force officers.

XII. Medical Personnel Policy Announced by Army - DA SGO, Technical Information Office, Wash. D.C.



A policy under which professional medical service officers assigned to Reserve or National Guard units called to active duty will be recalled only to the extent they can actually be utilized was recently announced by the Department of the Army.

Two general types of units will be affected by this policy. The first includes Army division, headquarters of medical battalions and groups, medical clearing companies, medical field laboratories, field hospitals, mobile army surgical hospitals, and all non-medical units with medical personnel included in their organizations.

Units included in the second group are evacuation hospitals, convalescent centers, general and station hospitals, general laboratories, hospital trains, and general dispensaries.

For the first group, the policy will be to call all medical service officers, including physicians, dentists and nurses, to duty with their units. However, only the minimum required for actual training will remain with their units during the training period. For example, although an infantry division is authorized 42 physicians, only 17 will be retained by the division during its training period. The balance will be assigned to the hospital serving the division. Provision has been made for rotation to assure that each physician has the greatest possible opportunity to continue a balanced medical practice, both with the unit in the field and at the station hospital. All the division dental officers would be utilized at the camp hospital or dental clinic.

For units falling in the second group, only the professional personnel actually required for training or support will be recalled. The balance of the assigned medical service officers will remain at home until a short time before the unit is actually ready for operation. Thus, in the case of a 1,000-bed general hospital, only three physicians and two nurses will initially be called to duty with the unit. The balance of the physicians and nurses will await a warning order for the unit's deployment. Dental officers will be used in the same manner as those assigned to units falling in the first group.

All Medical Service Corps officers and enlisted personnel assigned to all types of units will be called to active duty with their units.

Specific training period physician authorizations for units in the first group, compared with normal, full authorizations follow:

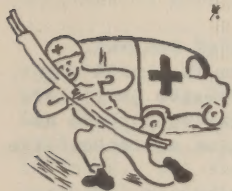
<u>Type of Unit</u>	<u>Physicians Authorized During Training Period</u>	<u>Total Number of Physicians Authorized</u>
Infantry Division	17	42
Armored Division	20	39
Airborne Division	18	43
Medical Clearing Company, Separate	4	7
Army Medical Field Laboratory	2	5
Field Hospital	4	13
Mobile Army Surgical Hospital	2	14
Light Armored Cavalry Regiment	1	4
Infantry Regiment, Nondivisional	2	6

Ordinarily, small nondivisional units authorized only one physician will be authorized to retain him during their training period. Examples of this type of unit are antiaircraft, chemical, signal and ordnance battalions.

Only the numbers of physicians shown below will be recalled initially with units falling in group two:

<u>Type of Unit</u>	<u>Physicians Authorized During Training Period</u>	<u>Total Number of Physicians Authorized</u>
Evacuation hospital, semi-mobile	4	29
Evacuation hospital, 750-patient	4	41
Army convalescent center	3	13
General hospital, 1000-bed	3	28
Station hospital, 500-bed	3	14
Station hospital, 300-bed	3	11
Station hospital, 200-bed	2	8
Station hospital, 100-bed	2	5
General laboratory	2	4
Hospital train	1	2
General dispensary	1	8

XIII. Medical Service Provided by a Collecting Station of the 24th Division - Captain Frank D. Thompson, Jr., MSC



Be prepared to move into a combat situation in 24 hours! This was the order issued at 0200 hours, 1 July 1950, to the Medical Company of the 34th Infantry Regiment; a unit which had been activated in April 1949 and whose problems up to that hour were those of providing medical service for personnel in the Regimental area of responsibility in Southern Kyushu; a unit which though helped somewhat by the Combat Effectiveness Program had not been on a full field training status because of having to operate with a minimum number of personnel.

Fortunately, however, we had kept a maximum number of men at available schools and of our enlisted strength of 115, the majority were well-trained technicians, drivers and mechanics, mess personnel, supply men, clerks, and other required personnel. The non-commissioned officers were of the highest order. Two of them were highly talented and remarkably well-trained young sergeants who had made the most of an unusual opportunity to work directly under the supervision of a series of medical officers for a period of two years in our tiny Sasebo "hospital". During the now famous delaying action, they both literally functioned as Battalion Surgeons. One of these men, Sgt. Clifford E. Black, was recommended for a battlefield commission after being wounded at Taejon; the other, Sgt 1/c John Gustron became missing in action at Taejon. Our officer strength consisted of one Medical Corps and two Medical Service Corps men.

At 0700 hours we called in all the first-three graders for a conference to sum up our problems, which at first seemed insurmountable. But once thoroughly discussed, they became almost simple. Our patients either went to duty or took the morning train to the 118th Station Hospital at Fukuoka. A few adjustments and our T/O assignments, already established for field maneuvers with the Regiment, were complete. Our T/E equipment was in excellent condition. Our transportation was ready to go. The men had been required to maintain full field equipment and this was inspected regularly; the remainder of their clothing and equipment went into duffle bags and aside from disposing of personal belongings they were ready to go. Administratively we determined what records should be kept. These we took with us or turned them in to the Division and the remainder we destroyed. The service unit remaining behind accepted responsibility for PCS property. Our funds were closed and turned in during the afternoon and at 1630 hours we made our final report to Regiment.

During the early evening unofficial word indicated departure time was not many hours away so the company aid men were sent to join the units with which they were to serve. Our regular policy for some months had been to send aid men to the various companies to screen daily sick call thus eliminating men with minor complaints from regular sick call and keeping the maximum number of men present for training in the line companies and giving our people experience as well. As nearly as was possible the aid men were assigned to the same companies they had worked with daily. The remainder of the Medical company remained intact for the first part of the movement.

The order to move came at about 0100 hours 2 July 1950. By 0200 hours our personnel was aboard ship while our motor train moved to a separate dock area for loading on LSTs. Shortly after 0500 hours, the Adjutant came down the deck looking for our area with Captain William Hills, MC, just off the 0500 train and sent from the 118th Station Hospital to join us. Loading of the troop ship was completed in good order, and we sailed at about 0600 hours. Fifteen hours later we docked at Pusan and marched to the Hialeh area where we bivouacked for the night. Each man dug a deep foxhole. We didn't need them but they were there if we had.

Here the aid station sections and the remainder of the medical platoons joined their battalions. Each platoon totaled about 30 men including the company aid men. 1st Lt James L. Grand, MSC, and Sgt Black were with the 1st Battalion platoon, and Captain Hills and Sgt 1/c Gunstron were with the 3rd Battalion platoon. Each platoon transportation consisted of one weapons carrier, 3/4 ton, and two jeeps with trailer. Captain Jack Sharp, MC, and I were with the Company Headquarters and Collecting Station.

The following day after all of the Regimental transportation arrived and the rail problems were solved, we began to move up. The move was made in three elements: 1st Battalion personnel and transportation, 3rd Battalion personnel and transportation, and the Regimental group consisting of Hq and Hq Company, Service Company, Medical Company, Heavy Mortar Company and all remaining transportation. It was necessary to argue a little at this point to insure the loading of Battalion aid station vehicles with the vehicles of their respective Battalions but it seemed imperative because there was no assurance that the entire Regiment would detrain at the same point and if they did not (and they did not) the Medical platoon would be without equipment and transportation.

At Taejon, Capt Zeitz, MSC, of Eighth Army, came through the train looking for the Medical Company and informed us that a provisional unit was set up there to receive our casualties. It was planned, he said, to keep a motorized rail car shuttling as far forward as possible and we were to keep the Taejon station informed of our needs by the railway telephone. He said some medical supplies were available immediately and that more were on the way.

Some hours later the Regiment detrained at several points a few miles south of Songwan. After assembling our convoy we moved into Songwan and set up the collecting station on the north edge of the village in one room of a schoolhouse forward and outside of the Regimental defensive perimeter. It developed that in every place we set up a school or college was the ideal if not the only place usable because playgrounds or yards were the only places large enough to permit dispersion and camouflage of vehicles.

The two Battalions had taken up positions on two roads extending to the north out of the village. We established contact with both aid stations, sent two litter jeeps to each, and after a long battle of sign language mixed with GI Japanese we finally got through to Taejon and got a rail car started up to us. Moral: Get an interpreter and keep him. Also, we left a man at the station to stop the rail car since Korean village names sound very much alike -- one village too far and the personnel and car would be gone.

The remainder of the day and the night was quiet. We had blacked out the station, dispersed the vehicles, and each man dug in. First contact with the enemy came about dawn in a heavy driving rain and the situation began to deteriorate almost immediately. A telephone wire had been strung into our area but was out of order in 30 minutes. About mid-morning a column of vehicles, apparently withdrawing, passed our area and then stopped, blocking the narrow road into the village. There was one way to get to Regimental Headquarters -- walk. The road had to be cleared so that we could continue evacuating and we had to get to Regimental Headquarters. Near the head of the truck column we learned the reason for the traffic jam -- a 2 1/4 ton truck and trailer, loaded with mortar ammunition, had slipped into the ditch, blocking the entire column. In the village we commandeered a truck equipped with a winch and with all the manpower that could be mustered the vehicle was pushed and dragged out and the road cleared. At Regimental Headquarters we found that the Service Company, and Hq and Hq Company had already pulled out of town, and that the Battalions were withdrawing. "You people had better get the hell out of here", we were told, "or you'll be racing tanks down the road."

Having no desire to commit the Medical Company against North Korean armor, in short order we had cleared our patients, dispatched the rail car to Taejon, and were moving south onward to Chonan on the main highway.

Summing up the engagement during this move, several object lessons became apparent. It was a mistake to set up off the main roads which were bad enough but at least permitted two vehicles to pass. In addition, we would have been much better off on the main road at the rear of the village. When the withdrawal began we could have seen the first elements leave and been in a better position to intercept any casualties brought to the rear by medical transportation or otherwise. It was a mistake not to be securely within the perimeter of some armed unit. It was a mistake not to spend time at Regiment closely following developments. Infantry commanders seldom discuss routes of evacuation or withdrawal. The reason for this is obvious, but medical people must know these things in order to form workable plans. We had unloaded equipment from three trucks to set up the collecting station. Trucks with trailers are difficult to maneuver and there had been some slight confusion in reloading -- these mistakes we did not make again.

The next stop was about five miles south of Chonan and while the two Battalions dug in

straddling the highway and railroad near Chonan, the Medical Company set up in the same area with Regimental Hq., in a schoolhouse 50 yards off the main highway. We tacked a red cross to a telephone pole on the highway with a crude pointed board indicating our position. Only an absolute minimum of equipment was unloaded and the trucks were reloaded so that one 2½ ton vehicle with trailer carried all required equipment for the station. Because of the tactical situation we established a rail head seven miles to our rear in another small village and brought the evacuation rail car to that point. Service Company set up at this rear point.

Lt. Grand of the 1st Battalion aid station and Sgt 1/c Gunstron of the 3rd Battalion aid station came back to locate us and to pick up supplies. Both had set up their stations as near the main road as possible and marked them well. Talking this situation over, another vital point was established. Due to the extremely fluid tactical situation, it was essential that the forward aid stations be kept empty of patients by continuous and rapid evacuation procedures. In order to accomplish this, it was obvious that these battalion aid stations must be set up in positions accessible to litter jeeps and other vehicles. The terrain was too rugged and the enemy situation too dangerous to permit the time consuming process of carrying patients by litter squads from aid stations to vehicle loading points. Jeeps, in addition to litter squads, were also used to negotiate trails and dikes in the evacuation of casualties from the forward line companies to the battalion aid stations. These various transportation problems were solved by keeping at all times at least two litter jeeps at each aid station, immediately sending more forward from the collecting station as required, and dispatching them to the rear as soon as they had loads of two litter patients each.

Our battalion aid stations were never overrun by the enemy by some great good fortune and also because the stations were always able to move on a moment's notice. On one occasion Lt. Grand had set up and was functioning but moved his station in darkness after mortars were moved in and began firing from a position slightly forward of him. A half hour later counter-battery fire raked the exact area where he had been. There were several instances of others being destroyed by infiltrating Red infantry. The station of one field artillery battalion was overrun by a small combat patrol and all personnel including the Surgeon were lost. One Battery Commander said one of his men, wounded in an arm, was lost because he had sent him forward to the aid station for treatment. It requires great personal courage to establish an aid station in a forward potentially exposed position, but it does not provide for the treatment and evacuation of the maximum number of wounded. It is not meant that aid stations should be set up far to the rear, but in order that they may accomplish their mission they must have security and they must be located where evacuation can be accomplished quickly and with relative safety.

The 34th Infantry patrols made contact with the advancing Reds north of Chonan the next morning. Artillery had joined us, as had a platoon of light tanks. By early afternoon one of the most savage battles of the campaign was developing as the Regiment fought bitterly to defend the town of Chonan. It is difficult to estimate now the number of casualties evacuated during this battle. During the afternoon and for hours after nightfall, our litter jeeps roared back and forth between the aid stations and the collecting station. Many wounded by-passed the aid stations and were brought directly into collection. We used all our weapons carriers and borrowed two more to move patients to the rail head. The rail car shuttled to and from Taejon at top speed. Our jeeps continued to go in and bring wounded out of Chonan after the town was virtually surrounded and all roads were under enemy fire. Even so, many wounded were overrun and killed. Jeeps running between collecting and the aid stations were fired upon. Finally the 3rd Battalion was ordered to retreat and began to fight its way out of the town. The 1st Battalion, on the left and the Artillery, also, began to fall back. Sometime before dawn the Regimental Executive Officer ordered a move and this time the Medical Company rolled into Chochiwon, and here we encountered the 21st Regiment of our Division.

The Medical Company was beginning to function efficiently. Line company commanders praised the company aid men who were bringing out wounded under impossible conditions. As one Platoon Leader said, "The infantryman has his hole and he could stay in it, but whenever a man was hit, the aid man had to move under fire and get him out." And they were doing it skillfully and routinely day after day with the coolness of old soldiers. The aid station people were finding the best positions, using the litter jeeps to the utmost between the station and the line, and keeping the stations empty. The collecting station was becoming streamlined. Upon arriving at a new location the station could be functional within 15 minutes. We had merely to back up one truck, unload minimum essential equipment and we were in business. While the first casualties were being treated arrangements were made for their further evacuation. They were tagged, their equipment was picked up for turn-in to S-4, and as each vehicle load became available, they were on their way to the rear. Someone was constantly at the Regimental CP keeping up with the tactical situation. If the road net made it necessary, guides were posted at intersections to direct incoming medical vehicles. Supply lists were made up daily and someone from the supply section rode the rail car to Taejon to bring the needed items back to us. On several occasions these men found it necessary to "persuade" native motormen to bring their rail cars as far forward as a Regimental area.

It was obvious early that it was vital to keep our vehicles in first class condition. Even though drivers were exhausted, it was insisted upon that the vehicles be immediately checked after a move. Tires were repaired, all gas tanks and crankcases filled, and extra gas loaded in such amounts as could be obtained. As vehicles came in from the aid stations they were checked, serviced and repaired. Exchanges were made as necessary to keep the best vehicles with the forward stations. Sgt 1/c Clark and his motor pool men did a wheelhorse job.

Mess personnel did their best to be resourceful, but there's not much to be done about a C-4 ration. The mess truck was always located where there would seem to be the least flies - but flies were everywhere. Memos were repeatedly sent out advising the closing of all Korean latrines and the use of slit trenches. S-4 supplied small amounts of lime which were spread over the closed native latrines. All water was treated and an engineer water point was established when the tactical situation permitted. Diarrhea appeared despite these precautions but not in serious form. Boiling water for cleaning of mess gear was always available when needed. A miserly use of a small supply of aerosol bombs we had brought along kept the stations relatively free of insects.

At Chochiwon we were joined by Lt. Don Miller, MSC, with an ambulance platoon and this greatly improved our situation. We could now establish forward ambulance shuttle points and, if necessary, evacuate all the way to Taejon by road.

The fight near the highway intersection north of Chochiwon developed with the Reds using their now familiar tactics. The battalions were hit with a mass frontal attack with numerically superior forces, then, after all American elements were engaged, large numbers of North Koreans began moving around both flanks. No particular difficulties with regard to evacuation were experienced here. The road net was favorable and during the first phase of the engagement we were able to send ambulances all the way into the forward aid stations. Rail cars were brought into the Chochiwon station only a short distance from where the collecting station operated in a girls' school. A large number of casualties came through during this battle as we were also receiving wounded from elements of the 21st Regiment which were in contact with the enemy to the east of the town.

A few hours before dawn of the second day the battered battalions began to withdraw and break contact with the Reds. Convoys began to pass our position moving to the rear and when the men we posted on the road reported Hq and Hq Company was passing, we loaded up and fell in at the end of the column. The rail car had left a short time before and it was necessary for the first time for us to carry patients with us. Fortunately none were in serious condition and were carried comfortably in two ambulances. We intended leaving two ambulances behind in case the aid stations were carrying patients but we learned the battalions were retreating down a parallel road to the west.

This was the long withdrawal to Kongju to the south and west of Chochiwon and the beginning of the establishment of the Kum river line. The 34th Infantry's sector was the city of Kongju and an area extending along the river bank in both directions. The 21st and 19th Regiments were to fall back to positions along the river line to our east. For the first time since the beginning of hostilities we were to fight as a Division.

The first defensive positions were taken up several thousand yards north of the river. A second line of positions was prepared along the north bank and the huge bridge spanning the Kum was loaded with explosives. The aid station set up along roads that converged at the bridge.

At Kongju the collecting station was established again in the same area with Regimental Hq about a thousand yards from the river on the main road leading to the south. At first the broad river provided a sense of security but study of the situation map was not so reassuring. The 1st Battalion was alone on line. What men and officers remained of the badly mauled 3rd Battalion were assembled in Kongju. A major asked for volunteers to form a provisional company. To the last man these ragged, exhausted, magnificent doughfeet shouted their readiness to continue the fight. There were just enough left of the original five companies of the battalion to form one small composite unit. The 3rd Battalion aid station set up with these people when they took a position in front of the city on the south bank of the river.

It was obvious that the direct highway to Taejon, which ran along the river's south bank without defilade for miles, would become unusable. A rail car was sent to Nonsan which was south and west of Taejon and directly south on the main road from Kongju.

Further cause for dissatisfaction with our position came when we learned that many elements of the artillery were placed to our rear. As the fire fight began the following afternoon it became apparent that the enemy was in great strength. Reports of infiltration across the river by small boat began to come in. By nightfall the 1st Battalion was heavily engaged and the distance between the thin line of resistance and the river began to shrink. At dawn the map indicated our position could be reach-

ed by enemy artillery from many areas and by heavy mortar fire. We asked and received permission to move to a new position on the south edge of the city. Although this was still not a good spot, the artillery being behind us, we had no other alternative. During the morning both artillery and mortar fire fell upon the Regimental Hq area where we had been and a forward artillery position was overrun by Red patrols. During the night a litter jeep dispatched to the 1st Battalion aid station had driven straight into an enemy roadblock and was riddled with machine gun fire. One man, badly wounded, escaped by rolling into a ditch where he remained with enemy all around him until a friendly patrol attacked and drove off the Reds.

As the situation continued to disintegrate the Battalion held the north bank of the river as long as possible and backed into the city. When all troops were across the river the bridge was blown. Enemy infiltration continued, more artillery was lost and enemy patrols were sighted along the river to our left and rear. Our situation was approaching desperation. The 1st Battalion was far understrength and throughout the Regiment key officers had been killed or wounded. Of the original Regimental staff, only the Executive Officer and the S-4 remained. The Medical Company had lost many men. All available men including cooks and assistant drivers were with the forward stations and line companies replacing men killed and wounded. Vehicles were breaking down. Litter racks on jeeps, of too light construction to begin with, had become contraptions of wire and wood.

Despite the existing conditions, the Regiment moved in good order from Kongju and dug in to fight again a few miles south. Flanked and driven from position, we moved again to Nonsan. Another fight and the bridges were blown and the Regiment moved northwest toward Taejon. In a precarious position along the road halfway to Taejon, the Regiment again turned on the pursuing North Koreans and inflicted heavy casualties in a brief engagement. Here the Medical Company operated with artillery firing all around our position. All through the day and night heavy machine guns fired at Reds in the hills above us. Ambulances rolling to the rear drew fire from the hills. The next evening we entered Taejon as the last elements of Division Headquarters pulled out to the south.

What happened at Taejon is now a well-known story. Replacements put both battalions back on a fighting basis. The artillery was re-inforced and a battalion of the 19th Regiment joined us to function as our 2nd Battalion. The road net was excellent. Observation planes operated from the local airport. We had a rail car and a small train available for evacuation. The aid stations, three of them now, were in excellent locations along the supply roads to the Battalions and the collecting station set up in a college with a large area behind for vehicles. Plenty of supplies came up. We were in the best shape we had been since before Chonan.

The night was quiet as was the morning. During the afternoon a strong enemy unit wedged between our 1st and 2nd Battalions and was battered back with heavy crossfire and artillery and mortars. Casualties were light and evacuation was fast. The Division Clearing Station was operating at Yongdong and the run could be made by the rail cars in little more than an hour.

By late afternoon the battle was joined. Massed enemy hit our entire front. The forward Regimental CP near the airstrip was shelled heavily and the CP moved back into the city. All during the night our jeeps and ambulances operated constantly bringing out wounded and then shuttling to the rail head. Rest for the drivers and aid men came only while the vehicles were being loaded and serviced. Early hours before dawn brought reports of vehicles being ambushed on the Yongdong road south of the city.

At dawn an enemy tank rumbled down the street in front of the collecting station. Red infantry apparently had infiltrated and street fighting began to rage throughout the city. A round from a high velocity tank gun smashed through a corner of our building and exploded over the entrance to the collecting station. Everyone had taken cover and only three of us were hit. No one was hurt critically and none were killed.

There was vast confusion and a great deal of gunfire for the next few hours. There were lulls in the firing during which wounded were brought in. Tank hunter teams with 3.5 rocket launchers, one of them led by the Division Commander, finally destroyed the tanks. Infantry cleared the Reds from part of the city. At 1400 hours our wounded were cleared and a train sent out. Our Battalions were withdrawing through and around the city. At 1600 hours the Medical Company moved out with three ambulances loaded with wounded.

Large sections of the city were burning as we moved through. Wires were down and the streets covered with debris but the convoy smashed its way through. One street was strewn with hand grenades which were cleared with no casualties. Once clear of Taejon, the convoy began to receive automatic weapons fire from the hillsides. It was a matter of running a gauntlet of fire for about three miles. That any vehicles came through seemed unbelievable. The entire valley was under a pall of dust and smoke from burning trucks. Gasoline blazed, ammunition blasted and tracers laced through the convoy,

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but the road was cleared again and again and the line continued to move. Once through this we went through the lines of an American infantry unit, then past artillery units, then on into Yongdong.

The Medical Company was badly shaken and temporarily out of business but the mission had been accomplished. The rest of the evacuation chain was working very well indeed.

XIV. Army Nurse Personnel of the 8055th Surgical Mobile Unit - Captain Phylliss M. LaConte, ANC



The history of the world is the history of man accomplishing the seemingly impossible and so the Army nurses of the 8055th Surgical Mobile Unit found it to be when activating their small group on 1 July 1950. Little did each member of this small unit realize at the outbreak of the Korean War that it would soon impose a series of demands on her and that in a few days she would be on Korean soil to care for the sick and wounded soldiers.

The order to activate came as a surprise to the nurses catching them unaware at their various stations in Japan. Nevertheless the response was quick and it wasn't very many hours before each one arrived at the 155th Station Hospital, Yokohama, Japan, the staging area. Called upon to mobilize the small unit were the following twelve nurses: from the Tokyo Army Hospital - Capt Phylliss M. LaConte, Chief Nurse; Captains Margaret Tollefson and Cecelia Kirshling; - from the 7th Infantry Division, Capt Elmira Dalrymple; - from the 155th Station Hospital, Lts Mary E. Keefe, Margaret Blake, Beulah Aunsbach and Neta Zinn; - from the 35th Station Hospital, Lts Marie McMinn, Eleanor Church and Erceel Cole, and from the 5th Cavalry Regiment, Camp McGill, Lt Mary E. Angelich.

The two days spent at the staging area were busy ones for each one had to gather and pack her equipment of bedding roll, tent, mess gear, gas mask, helmet, field shoes, fatigues suits and all other articles that make up a full field pack, plus her own individual possessions which she choose to carry along to Korea.

Monday morning, 3 July, found the group leaving the staging area. At 1200 each one loaded down with all her paraphernalia, boarded the train at the RTO and started the first lap of her journey across Japan to the war in Korea.

The entire unit detrained at Sasebo, 0700, 5 July and "fell out" to their first C-ration breakfast served in the railroad yard and wide open spaces. The few hours that followed were weary ones for the group sat on their stuffed and knobby bags waiting for the order to proceed to the ship which was to take them across the Korean Straits.

A very warm welcome was given to the unit as it embarked on the USS Titania that afternoon.

The voyage which started at 0530 the next day was a peaceful one except during the few moments when the ship's crew would practice gun fire and when the eyes would fall on the destroyer leading the way and giving protection, then questionable fear would disturb the mind as to what the future days would hold.



The ship arrived at Pusan, Korea, during the small hours of 7 July. In a drizzling rain, the nurses debarked and were loaded into 2½ ton open trucks to take them to the schoolhouse which was to be their temporary quarters. Here the group spent the day uncrating, sorting, and repacking surgical equipment and other medical supplies to take with them to the front.

We left Pusan at 1930, 8 July, aboard a dirty Korean train to arrive at Taejon at 0730 the following day. Upon arrival at the schoolhouse where the unit was to have its first location, the group immediately set-up their particular part of the hospital and at 1400 hours were ready to receive its first battle casualty. It was a new experience for many to work directly out of chests with limited

supplies and equipment, but ingenuity and initiative traits of the enlisted men, officers, and nurses combined improvised things to give the appearance of a small hospital. Lt Blake, charge nurse, and Lts McMinn and Church were assigned to the pre-operative ward and shock ward which received the casualties first on their arrival to the hospital. After receiving necessary treatment and pre-op preparation the cases were sent to the operating room supervised by Capt Tollefson with Capt Dalrymple as her assistant and Lt Keefe as scrub nurse. There also, Capt Kirschling, anesthesia supervisor, and Lt Zinn, anesthesiologist, did their duties. After surgery with Lt Angelich in charge, and Lts Cole and Aunsbach, post-op and holding section would receive the patients and would hold them until evacuation to another hospital - usually 24 hours.

The stay in Taejon was short, for 5 days later, 14 July, at 2100, the group was ordered to leave immediately. The 4½ hour trip to Yongdong was one which many will not forget for a long while. It seemed that the train was occupied by more than just the unit of nurses, officers and enlisted men - despite the DDT and insect repellent, the fleas were there to stay.

We left the train at Yongdong at 0230 and in the hour spent waiting for a vehicle to arrive which was to take us to our next site, we tried to catch up on some of our sleep, resting in whatever available space we could find on station benches or on the ground.

At Yongdong the group occupied what was formerly known as an Agricultural school and the hospital set-up was similar to that of Taejon. The 24th Division Clearing Station occupied one side of the building and from there the seriously wounded would be sent to the pre-op ward.

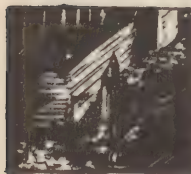
Another order to move again came late Monday night, 17 July, and departure took place the next day at 1400 again by train, to arrive at Taegu at 2045 the same day. A few hours later the group occupied the State Teachers College, a much larger and cleaner building than the building occupied previously. After a few hours of sleep on the floor, the group set-up and the patients began to arrive. At this moment General Walker and Colonel Dovell paid the staff and hospital area a visit. Here at Taegu the same set-up was used as that at Taejon and Yongdong with the exception of the post-operative and holding sections which were now separated into two different sections. Because of the larger increase of patients to be evacuated, the change placed the nurses on a definite 12-hour day and call at night, if need be.

Housing facilities at Taejon and Yongdong were poor and insect infested. The nurses and all their gear were crowded into one small room. Since no water was available in the building it had to be drawn from an old pump or from a Korean well making it necessary to wash and bath out of a helmet. In Taegu a little more space was allotted to the group permitting six to occupy a room, except when flight nurses and train nurses arrived and then they "doubled up".

During the month not much change had taken place in the regular duties of the group except for the Chief Nurse, Captain LaConte and Lt McMinn who left Yongdong on 18 July to take seriously ill patients to Taegu for air evacuation. Since no flight nurses were available they were further required to make the flight to Itazuke, Japan, to give needed treatment and care to the patients evacuated. Their return trip was made the next day to Taegu where they awaited the arrival of the rest of the unit from Yongdong. Due to the increased number of patients in Taegu to be evacuated, it became necessary for Capt LaConte to take the added duty of escorting patients to the airstrip or train and remaining with them until the flight or hospital nurses would take over.

Notes of interest for the month were the visit of General Douglas MacArthur, Major Madeline Desmond and the 8076th and 8063rd Surgical Mobile Units. General MacArthur arrived 26 July and visited the wounded giving words of comfort and encouragement to each one. Major Madeline Desmond, newly appointed Chief Nurse of Korea arrived 31 July and immediately began to acquaint herself with the personnel and their particular duties. The 8076th with Captain E. Johnson in charge arrived 27 July and remained until 2 August for quarters, at which time they departed, to set-up their hospital. During their stay at Taegu they gave a helping hand to the hostesses thus giving extra hours of rest. The 8063rd with Captain Boles as Chief Nurse, arrived 29 July and departed for Pusan the same day, after a brief rest.

In concluding the month's review, it can be truly said that the nurses of the 8055th unit are serving willingly and well in giving the best care to the wounded, plus carrying out on-the-spot teaching program to the enlisted men whose help is needed on the wards. The hours were long but happily spent in trying to be of aid to the doctors and administer proper care to the patients. It is felt by many who have had many years of nursing experience that never had they worked so hard and had so little and yet been so happy in their day. They are also sure the many kindness shown them by their CO, Major I. Tender, Lt Col Gritsavage, Chief Nurse, FEC, flight nurses and others have helped tremendously in lightening their load and with their backing and support they can continue to serve through difficulties or crises.

XV. Recent Department of the Army and FEC Publications

AR 600-45, 27 Jun 50 - Personnel: Decorations
 AR 40-538, 7 Aug 50 - Medical Service: Property Exchange and Accountability in Evacuation of Patients
 AR 40-660, 8 Aug 50 - Medical Service: Patients' Effects; Hospital Clothing; Medical Property and Appliances
 AR 600-450, 30 Aug 50, C-1 - Personnel: Separation for Physical Disability
 AR 615-361, 30 Aug 50 - Enlisted Personnel Discharge - Marriage and Pregnancy
 AR 140-305, 1 Sep 50, C-5 - Organized Reserve Corps: Organization
 AR 40-25, 6 Sep 50, C-4 - Medical Department, WMSC: General Provisions
 DA CIR 40, 1 Aug 50 - Sect VI: Medical Treatment in Army Medical Facilities, Fiscal Year - 1951
 DA CIR 45, 28 Aug 50 - Medical Treatment in Army Medical Facilities - Fiscal Year - 1951
 SR 310-20-5, 1 Mar 50 - Military Publications - Index of Administrative Publications
 SR 730-20-5, 31 Jul 50, C-3 - Oversea Supply; Oversea Command Forecast of Requirements
 SR 35-210-51, 9 Aug 50, C-3 - Finance and Fiscal General and Special Appropriations, FY-1951
 SR 725-15-1, 10 Aug 50 - Issue of Supplies and Equipment. Par 5 c - Army Medical Service
 SR 140-155-1, 22 Aug 50, C-1 - Organized Reserve Corps - Commissioned Officers Promotion, Par c. AMS
 SR 715-55-5, 22 Aug 50, C-1 - Procurement of Supplies and Equipment - Materiel Inspection and Receiving Depot
 SR 320-50-1, 22 Aug 50, C-1 - Military Terms, Abbreviations and Symbols - Authorized Abbreviations
 SR 615-360-40, 25 Aug 50 - Enlisted Personnel - Disposition of Individuals with Physical or Mental Disability which existed prior to entry on active service
 T/O&E 8-565, 26 Jun 50 - Station Hospital, 300-Bed, Communications Zone
 T/O&E 8-551, 3 Jul 50 - General Hospital, 1000-Bed, Communications Zone

PART II

TECHNICAL

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XVI. Trench Foot

The most serious cold injuries of the lower extremities are those of trench foot, frostbite and immersion foot. Though these conditions differ somewhat in their mode of origin, the pathogenicity and end result of each are essentially the same. Of the three, trench foot is the most likely to affect significant numbers of troops operating under conditions which will be experienced this fall and winter in the Korean operation.

Trench foot results from continued exposure to temperatures ranging from just above freezing up to and possibly somewhat above 50 degrees F. The likelihood of its occurrence is enhanced if wet conditions accompany these temperatures. In addition to these unfavorable environmental conditions, other contributing factors include immobility of the extremities, continued dependency, inadequate clothing both for body coverage and foot protection, constriction of tightly fitting socks and shoes, under nutrition and fatigue. Thus this serious injury is a hazard heightened by the environmental conditions too frequently attending those under which the front line soldier lives and fights in winter campaigns.

The essential pathological processes of trench foot and other cold injuries to the extremities are those of vascular and nervous system responses to continued low temperatures. These responses result in ischemia and resultant anoxia of arteriolar vessels, capillaries and other tissues followed by exudation and edema. These processes continued long enough lead to definite tissue damage, the end

result of which may be gangrene.

As already indicated, trench foot is an injury most likely to affect the front line soldier living and fighting under adverse cold wet conditions. During World War II, more than 55,000 cases of cold injury to the extremities, principally trench foot, were reported among American troops. Using the conservative estimate of 50 days lost per case, this resulted in a manpower loss of nearly 8,000 man years; this loss sustained by the selected group of front line troops. The long period required for convalescence is further accentuated by the fact that in many instances susceptibility to subsequent cold injury is increased and for this reason recurrences may be expected if the original conditions are repeated.

The prevention of trench foot is based on the triad of adequate cold weather clothing and equipment, complete indoctrination and training of personnel in the proper use of such equipment and continued emphasis by commanders on the application of the necessary prophylactic procedures. In brief these procedures include the carrying of extra pairs of socks by each soldier and the changing of socks daily or oftener; removal of shoes at least once in 24 hours and at night if possible; massaging of the feet at frequent intervals; emphasis on exercise of the feet and lower extremities; the rotation of individuals and groups in and out of front line "pinned down" positions; availability and use of warming devices; the provision of hot food and drink when possible; and referral of soldiers with early trench foot complaints to the rear for medical attention.

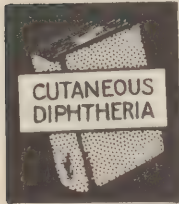
The diagnosis and treatment of trench foot as well as information concerning its pathogenicity and prevention are presented in some detail in TB MED 81, with change 1. All medical officers who may be confronted with the management of these injuries should be completely familiar with this publication. Diagnosis and treatment or at least classification of these injuries should begin at the farthest forward medical installation. The earliest symptoms are those of a sense of coldness in the feet which is soon followed by numbness. During this early period, there may also be tingling and mild aching sensations in the lower extremities, ankles and feet. A frequent and typical complaint is that of clumsiness in walking and the feet feeling like "blocks of wood", or "chunks of ice". Swelling occurs several hours to several days after these symptoms are noted. The condition generally proceeds through three stages. In the prehyperemic or ischemic stage, lasting usually for several hours or more, the feet remain cold and numb with perhaps some swelling and discoloration. Peripheral pulses may be absent for some hours. A severe burning pain usually ushers in the hyperemic or inflammatory stage which lasts for days or weeks. In this phase swelling becomes pronounced and the feet are red, hyperemic, hot and dry with the return of the peripheral pulses. The end of this stage is marked by subsidence of edema, heat and redness. In milder cases, the posthyperemic stage is the one of recovery. In the more severe cases, however, there may be recurrences of pain, tingling and swelling, especially on ambulation or exposure to cold. In a limited number of cases further complications may become apparent. These may include continued deep-seated pain with tenderness of the foot and joints. There may even be limitation of motion with muscular inadequacy and difficulty in walking. Excessive sensitiveness to cold with the occurrence of a Raynaud like phenomenon is an occasional complication. In the severe cases these sequelae have been observed for months or even years after the original injury.

Recognition of the acute phase of the injury in forward areas is extremely important. Here, by careful observation, the medical officer must determine which individuals complaining of foot symptoms are suffering from true injuries due to cold. These, after a change to warm dry clothing, must be evacuated to the rear for treatment as non-ambulatory patients. Walking on cold damaged feet may lead to serious consequences.

In the hospital recumbency is required with the feet on a level with the rest of the body. Heat should not be applied; the feet being kept at room temperature with artificial cooling being indicated at times, especially during the hyperemic stage. Protection from pressure points is important, generally these patients will not tolerate bed clothes on their feet. Careful asepsis should be practiced in handling the affected parts with special care in the presence of ulcers or necrosis. Antibiotics and tetanus toxoid should be administered when indicated. Surgical treatment should be conservative with amputations delayed as long as possible; past experience indicating surgical intervention and amputations to have been indicated only rarely. Graduated exercise should be initiated after the hyperemia and edema have subsided. Physiotherapy including warm baths should be reserved for the late stages but is of value then particularly in the presence of foot deformities arising from fibrosis, muscular atrophy and edema.

A generally nutritious, high protein diet with added vitamins particularly B complex, should be provided throughout the course of treatment.

XVII. Diphtheria of the Skin - Major Milton H. Hollander, MC, Chief of Communicable Disease and Pediatric Section, Osaka Army Hospital, APO 25-5



Cutaneous diphtheria was seen not infrequently during World War II, particularly in the Pacific and China-Burma theaters. It was responsible for much disability and several deaths. It should be especially watched for in personnel returning from the conflict in Korea. It is the purpose of this paper to bring up to date the known facts regarding this disease.

Diphtheria of the skin is very uncommon in the United States, and therefore never seen by most physicians. Recognition of any disease depends primarily upon awareness of the existence of the condition, and secondly upon the ability to diagnose it.

Cutaneous diphtheria is essentially a tropical and sub-tropical disease problem. The diphtheria bacillus has a predilection for the skin under hot, humid, tropical conditions. It is prone to occur under combat conditions with its associated poor personal hygiene, various skin injuries and close personal contact. It has been estimated that about one third of adults of military age are Schick positive, and therefore presumably susceptible to diphtheria.

One may define cutaneous diphtheria as any lesion of the skin caused by virulent *Corynebacterium diphtheriae*.

Etiology:

Cutaneous diphtheria, just as the nasopharyngeal variety, is due to *Corynebacterium diphtheriae*. The organism is polymorphous, but is characteristically slender, slightly curved and sometimes clubbed. It is gram-positive, non-motile and non-spore forming. It is readily destroyed by heat (60 degrees C. for 10 minutes), but may survive freezing and withstand drying.

Smears for diagnosis are usually stained with methylene blue. One cannot differentiate pathogenic from non-pathogenic bacilli taken directly from the lesion in this way. Moreover, it is important to bear in mind that a negative smear never rules out the presence of the organism.

There are virulent and non-virulent strains of the organism. At present, this can be determined only by the inoculation of experimental animals, rabbits or guinea pigs, with the diphtheria bacilli. Virulent forms are classified primarily on the basis of colony growth and are divided into gravis, intermediate and mitis forms.

Pathology:

The organisms tend to proliferate at the local site and under advantageous conditions produce a toxin which is extremely potent. The toxin affects the local tissues early, causing death and disintegration of the cells in the immediate vicinity of the organisms. As necrosis proceeds, ulceration occurs. Cellular debris, fibrin, white cells, and other blood and tissue elements form the typical membrane of this infection. Early, there may be an inflammatory reaction about the lesion with erythema, edema and tenderness.

The toxin is absorbed by way of capillaries and perineural lymphatics. Peripheral nerve tissue, heart muscle and kidney tubules are affected early. Both sensory and motor nerve fibers are affected, but the latter are much more frequently involved than the former.

The organisms are generally found under or at the edges of the membrane.

Clinical Picture:

It is generally believed that the diphtheria bacillus is not able to penetrate the intact skin. Once the epithelial integrity is destroyed, either by trauma or cutaneous disease, organisms may be introduced and find a suitable medium for growth and toxin production.

Diphtheritic lesions often occur on the lower extremities where various factors operate to produce breaks in the skin. However, they have been reported from all sites, including the anal mucocutaneous junction. Insect bites and minor abrasions are common antecedents for lesions on the forearms and other areas.

Diphtheria may impose itself upon a variety of skin diseases including epidermophytosis of body and/or toes, impetigo, ecthyma, acne, paronychia and eczematous lesions. The last, especially,

tends to be extremely indolent.

Systemic reaction is almost always absent. The patient complains only of such discomfort as may be caused by the skin lesion. Symptoms such as fever and prostration, or other evidence of toxicity, as is seen in nasopharyngeal diphtheria, is in all probability due to secondary infection of the skin with other bacteria, such as hemolytic staphylococci.

The typical lesion is an ulcer, which is rounded, relatively deep and appears "punched out". Early it is covered with a grayish, yellowish, or brownish-gray membrane. This membrane can be peeled off leaving a clean, hemorrhagic base.

The base dries quickly and forms a thin, leathery covering which becomes dark brown or black and rather adherent. This sloughs off spontaneously after a variable period of time, usually in one to three weeks after the onset of the infection.

On manipulation, the adherent leathery slough can usually be loosened around the borders, and it is from here that smears should be taken.

The margin of the fully developed ulcer is usually sharply defined, rolled, appears slightly undermined and often has a bluish-red tinge.

The ulcers vary in size from a few millimeters to several centimeters. They may be multiple or single. They are commonly indolent, and tend to break down frequently, either spontaneously or on minimal traumatization. After a few weeks they tend to become anesthetic to pinprick, a helpful diagnostic sign.

Healing follows a rather definite pattern. The previously rolled margins gradually flatten out. Epithelialization proceeds from the periphery towards the center, rather rapidly at first but later more slowly. As a rule, the exact center, the most avascular area, is the last to heal over. Because of the large zone of avascularity, larger scars are usually difficult and slow to heal.

Complications:

Manifestations of myocarditis usually appear suddenly and early while those of neuritis tend to develop insidiously and may not appear for two to four months.

1. Myocarditis: Cardiac complications average 5%. There is acute parenchymatous degeneration followed by reparative inflammatory reaction. Acute toxic myocarditis with heart failure is most common during the second week of the disease. It is associated with typical electrocardiographic changes.

2. Peripheral Neuritis: Neurologic complications average 20% in most series and up to 34% in one group. It is a painless, toxic peripheral neuritis. The development of the neuritis need not be related to the severity of the diphtheria. The following types are found, in order of frequency: palatal paralysis (with hoarseness and dysphagia); paralysis of ocular muscles; one or more extremities the lower being involved more than the upper. The period of most pronounced involvement lasts one to two weeks, with slow recovery over several weeks to months. Recovery is usually complete.

3. Guillain-Barre-like Syndrome: Bilaterally symmetrical paralysis of the lower extremities involving motor or sensory and motor changes, with associated little or no increase in cells in the spinal fluid and moderate increase in total protein (albuminocytologic dissociation).

4. Kidney Involvement: Cloudy swelling with necrosis of tubular epithelium and interstitial damage. Albuminuria is present. Glomerulonephritis is rare.

Diagnosis:

The diagnosis will never be made unless the medical officer maintains a high index of suspicion. The following procedure is recommended:

1. Lift up the edge of the membrane and take the specimen for smear and culture from near the margin of the ulcer.

2. Inoculate culture medium with adequate material.

3. Make direct smears. This is usually of little value because the slide is almost invariably contaminated by numerous bacteria.

4. Use separate swabs on blood agar and on a Loeffler's slant, with subsequent identification on tellurite and by appropriate carbohydrate reactions.
5. If suspicious, material should then be sent to the 406th Medical General Laboratory on a Loeffler's slant for appropriate animal inoculation for virulence studies.
6. Repeat cultures every 24 to 48 hours.
7. Finally, it must be emphasized, that diagnosis depends very much on skilled, experienced laboratory personnel.

Treatment:

1. Isolation: Virulent diphtheria organisms may infect wounds and such cases should be removed promptly from a surgical ward.
2. Absolute bed rest for at least two weeks. Observe for cardiac and neuritic complications. Appropriate general care.
3. Diphtheria antitoxin: The use of antitoxin is indicated without waiting for laboratory confirmation if the lesion is suspicious of cutaneous diphtheria. It is felt that it hastens the healing of the skin lesions if given during the first two weeks after the onset of the disease. After this it is used only to reduce the incidence of complications.

Adequate dosage should be given at the first injection. Injected antitoxin neutralizes that toxin which is free in the circulatory system. It has no effect upon that which is already bound by the body cells. For an average case, give 10-20,000 units intramuscularly. For the severe, toxic case, give 20,000 units intravenously and 20-40,000 units intramuscularly.

Preliminary skin testing is indicated in all cases. Use 0.05 cc of 1:20 dilution of anti-toxin intracutaneously and observe for 20-30 minutes.

4. Penicillin: Use in adequate dosage intramuscularly as well as by local compresses.
5. Attendants should be Schick negative.
6. These lesions are best treated early, while the ulcer is still small, in order to prevent large avascular scars.

Conclusion:

Cutaneous diphtheria is a not uncommon tropical and sub-tropical disease of military importance. One should be critically suspicious of every chronic, indolent ulcer occurring in anyone who is or has been in an endemic area.

ACKNOWLEDGEMENT: Acknowledgement is given to Capt Frederick W. Hindley, MSC, Laboratory Officer, Osaka Army Hospital, for technical advice used in the preparation of this paper.

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- TB MED 143 - Cutaneous Diphtheria, February 1945 with Change 1, February 1947

XVIII. Table of Susceptibility of Microbial Pathogens to Chemotherapeutic Agents



The following table of susceptibility of micro-organisms is reproduced in this publication as a ready reference for medical personnel in this command.

Data are principally based on available clinical experience, and to a lesser extent, on in vitro tests. The drug of choice listed may be supplanted as further experience accumulates. Combinations of chemotherapeutic agents often produce additional benefits.

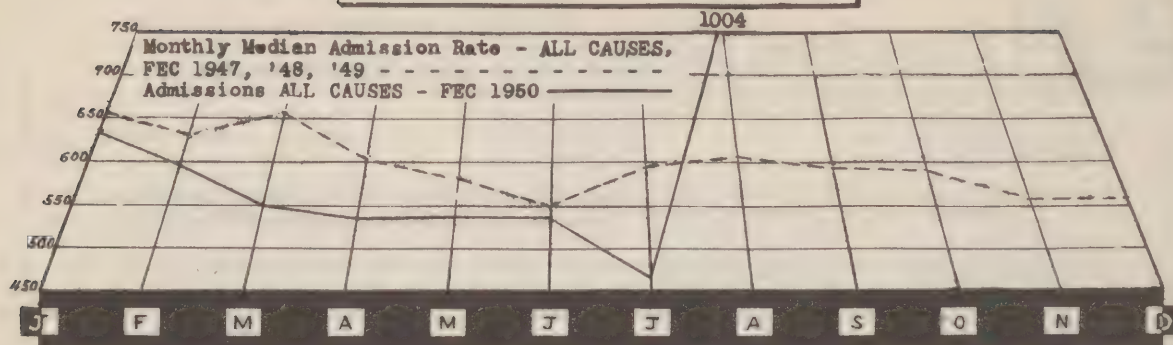
++ = Drug of choice O = No significant activity ? = No data available
 + = Alternative drug V = Significant variation in (S) = Sulfones (promizole, promin)
 ± = Weak activity or inconclusive data susceptibility of strains

Organism	Diseases or Infections	Penicillin	Streptomycin	Aureomycin	Chloromycetin	Poly-myxin	Sulfon-amides	Bacitracin	Tyro-thricin
<i>Streptococcus hemolyticus</i>	Suppurative infections	++	±V	+	+	O	+	+	+
<i>Streptococcus viridans</i>	Suppurative infections	++	±V	+	+	O	±	+	+
<i>Streptococcus fecalis</i>	Suppurative infections	+V	±V	++	+	O	±	+	+
<i>Staphylococcus aureus</i>	Suppurative infections	++V	±V	+	+	O	+	+	+
<i>Staphylococcus albus</i>	Suppurative infections	++V	±V	+	+	O	+	+	+
<i>Diplococcus pneumoniae</i>	Pneumococcal infections	++	±V	+	+	O	+	+	+
<i>Clostridium</i> group	Tetanus and gas gangrene	++	O	?	?	O	+	+	?
<i>Corynebacterium diphtheriae</i>	Diphtheria	++	O	+	+	O	O	?	?
<i>Bacillus anthracis</i>	Anthrax	++	?	?	?	O	+	?	?
<i>Bacillus subtilis</i>	(Rarely infects man)	++	+	+	+	?	+	?	?
<i>Neisseria gonorrhoeae</i>	Gonorrhea	++	O	+	+	O	+	O	O
<i>Neisseria meningitidis</i>	Meningococcus meningitis	+	O	+	+	O	++	O	O
<i>Hemophilus influenzae</i>	Influenzal infections	O	++	+	+	+	+	O	O
<i>Hemophilus pertussis</i>	Whooping cough	O	+	+	+	++	+	O	O
<i>Hemophilus ducreyi</i>	Chancroid	O	+	++	+	+	+	O	O
<i>Klebsiella pneumoniae</i>	Friedlander's pneumonia	O	++	+	+	+	+	O	O
<i>Escherichia coli</i> (B-coli)	Suppurative infections	O	++	+	+	+	+	O	O
<i>Aerobacter aerogenes</i>	Suppurative infections	O	++	+	+	+	+	O	O
<i>Proteus vulgaris</i>	Suppurative infections	O	++	±V	±V	O	+	O	O
<i>Pseudomonas aeruginosa</i>	Suppurative infections	O	±V	±V	±V	++	±	O	O
<i>Eberthella typhosa</i>	Typhoid fever	O	O	+	++	+	+	O	O
<i>Salmonella</i> group	Paratyphoid fevers, etc.	O	O	+	++	+	+	O	O
<i>Shigella dysenteriae</i> and group	Bacillary dysentery	O	+	+	+	+	++	O	O
<i>Pasteurella tularensis</i>	Tularemia	O	++	+	+	?	O	O	O
<i>Pasteurella pestis</i>	Plague	O	++	+	+	?	±	O	O
<i>Brucella</i> group	Undulant fever	O	+	++	++	+	+	O	O
<i>Bacterium funduliformis</i>	Suppurative infections	++	?	?	?	?	?	?	?
<i>Streptobacillus moniliformis</i>	Haverhill fever	++	?	?	?	?	?	?	?
<i>Actinomyces bovis</i>	Actinomycosis	++	O	?	?	O	+	?	?
<i>Erysipelothrix rhusiopathiae</i>	Erysipeloid	++	?	?	?	?	?	?	?
<i>Treponema pallidum</i>	Syphilis	++	±	±	±	?	O	+	O
<i>Treponema pertenue</i>	Yaws	++	±	?	?	?	O	+	O
<i>Borrelia recurrentis</i>	Relapsing fever	+	O	++	+	?	O	+	O
<i>Spirillum minus</i>	Rat-bite fever	++	O	?	?	?	O	?	O
<i>Leptospira icterohemorrhagiae</i>	Weil's disease	+	?	++	?	?	O	?	O
<i>Mycobacterium tuberculosis</i>	Tuberculosis	O	++	±	±	?	+(S)	O	O
<i>Mycobacterium leprae</i>	Leprosy	O	+	?	?	?	++(S)	O	O
<i>Psittacosis virus</i>	Psittacosis	+	O	++	+	O	±	O	O
<i>Lymphopathia venereum virus</i>	Lymphopathia venereum	+	O	++	+	O	+	?	O
<i>Prim. atypical pneumonia virus</i>	Prim. atypical pneumonia	O	O	++	+	O	O	O	O
<i>Donovan body</i>	Granuloma inguinale	O	+	++	?	?	O	?	O
<i>Rickettsiae</i> (entire group)	Typhus and spotted fevers	O	O	++	++	O	O	O	O

* Chatton, Milton, Mergen, Sheldon, and Brainerd, Henry D.: Handbook of Medical Management, University Medical Publishers, Palo Alto, Calif.

PART III - STATISTICAL

HEALTH OF THE COMMAND



Due to lack of Army Statistical Health Reports from RYCOM, the following data presented below is exclusive of RYCOM personnel.

Admission rates per 1000 troops per annum for the four-week period ending 25 August 1950 were as follows:

	<u>FEC</u>	<u>JAPAN</u>	<u>KOREA</u>	<u>MARBO</u>	<u>PHILCOM(AF)</u>
All Causes	1004	534	1953	274	267
Diseases	672	485	1096	221	235
Injuries	88	47	164	52	32
Battle Casualties	245	2.1	693	0	0
Psychiatric	100	16	258	4.0	5.6
Common Respiratory Diseases and Flu	33	33	35	24	24
Primary Atypical Pneumonia	2.1	1.7	2.9	0	1.9
Common	26	6.0	65	0	0
Bacillary Dysentery	1.7	.48	4.1	0	0
Amebic Dysentery	1.7	0	.24	0	1.9
Malaria, new	18	13	31	0	0
Infectious Hepatitis	4.9	5.2	5.1	0	5.6
Mycotic Dermatoses	4.7	2.1	10	0	0
Rheumatic Fever	.43	.79	0	0	0
Venereal Diseases	99	168	14	13	62

The RYCOM Army statistical health reports for August have not as yet been received, therefore data submitted herein pertaining to the Far East Command will be exclusive of RYCOM, except so much as pertains to poliomyelitis and encephalitis. Since submission of the last report, adequate data have been received from EUSAK to allow a recomputation of the July FEC figures. Consequently, a difference may be noted in July figures used in this report when compared with those used in the report for last month. The incidence of diseases, injuries and battle casualties among troops in Korea during July had very little influence on the overall FEC rates. The incidence among these troops during August, however, has caused a considerable change in the FEC rates.

In August, the all causes admission rate for admissions to hospital, quarters and dispensaries increased from a rate of 577 in July to 1004. In comparison with recent months, the all causes admission rate among the major commands other than Korea showed no appreciable change. The rate for Korea increased from 980 in July to 1953 in August. The disease component for FEC increased from 414 in July to 672 in August. The disease rate for troops in Korea was 1096. MARBO's rate remained about the same, 221; PHILCOM(AF) had a slight increase from 202 to 235, and Japan, from 451 to 485. The nonbattle injury component for Japan, PHILCOM(AF) and MARBO is comparable to past experience. Korea's nonbattle injury rate was 164 for the month. The battle casualty component (exclusive of KIA's) was 245 as compared to 103 of the previous month. This component of the all causes rate is of course attributable entirely to Korea, giving that command a rate of 693, as compared to their previous month's rate of 480. Admissions for diseases, nonbattle injuries and battle casualties have been high for

troops in Korea. This has been the inevitable result of the conditions there and the nature of the operation. It is of interest to note that the proportion of diseases and nonbattle injuries to battle casualties has thus far been well within the ratios experienced in previous conflicts.

The average daily non-effective rate for the Far East Command for all causes for August represents a sharp increase as is to be expected. The rate for August is 36 as compared to 17 in July and 15 for each of the previous three months. MARBO and PHILCOM(AF) show no change when compared to previous months. Korea's non-effective rate was 19; however, this is not significant due to the short evacuation policy. Japan's rate has increased from 13 in June to 19 in July and 49 in August. This of course is due to the great number of patients evacuated from Korea.

DISEASES:

Common Respiratory Diseases and Influenza: Among the major commands, and including Korea, the rates remained rather static and comparable to the Far East Command rate.

Psychiatric: As a result of activity in Korea, the Far East Command psychiatric rate increased sharply from 18 per 1000 per year to 100. As will be recalled, prior to hostilities, the rate for these diseases for the Far East Command had remained rather static at the rate of about 8.5. PHILCOM(AF) and MARBO's rates depict no change, while Japan experienced an increase from 8.7 in June to 10 for July, and 16 for August. Korea's rate increased from 50 in July to 258 for August. This rate is considered reasonable when compared to past experience for like situations.

Malaria: The incidence of new malaria in the Far East Command represents a marked increase from the previous month. The July rate was .81 as compared to 18 for this month. No cases of malaria were reported from PHILCOM(AF) and MARBO. Japan's rate increased from .35 in July to 13. Korea reported a rate of 31. Of significance is the fact that two-thirds of the cases charged to Japan occurred among personnel recently returned from Korea. 85% of all malaria cases in the Far East Command for the month are traceable to Korea.

Common Diarrhea and Dysentery: The incidence of intestinal diseases infections represents a sharp rise since June. The rates are as follows: June 4.9, July 21 and August 46. Here again the increase is entirely attributable to Korea. Although Japan presents an increase from 2.5 in July to 9.5, it results from evacuees from Korea. In comparison with the other major commands which experienced a rate of about 4 or less, Korea's rate for the month was 115.

Poliomyelitis: This report includes cases occurring among both military and civilian occupation personnel. During August, 22 cases were reported in the Far East Command with no deaths resulting. Thirteen of these cases were reported from Japan, 5 from Korea, 2 from MARBO and 2 from PHILCOM(AF). This brings the total cases for the year through August to 55 with 2 deaths resulting.

Encephalitis: 45 cases of encephalitis with 9 deaths resulting were reported during the month of August. Fourteen of these cases with 5 deaths were reported from Japan, 27 cases with 4 deaths from Korea, and 4 cases with no deaths from RYCOM. Ten of the 45 cases have been confirmed as Japanese B type. This brings the FEC total for both military and civilian occupation personnel to 53 cases, with 9 deaths resulting. Ten of these cases have been confirmed as Japanese B type.

Venereal Diseases: Since June, considerable decrease in the total venereal disease rate for FEC is noted. The rates for June, July and August are 145, 117 and 99 respectively. As in the above increases in disease incidence, this decrease is also attributed to Korea. No significant change was noted in any of the major commands. Korea's rate for the month was 14 per 1000 per year.

Battle Casualties, Nonbattle Injuries and Deaths: The battle casualty rate for the Far East Command during July and August was 103 and 245 per 1000 per year respectively. These of course are all chargeable to Korea whose rates were 480 in July and 693 in August. The FEC nonbattle injuries rate was 60 in July and 88 in August. Japan, MARBO and PHILCOM(AF) experienced a minor decrease in their rates but remain comparable with past experience. Korea's rate was 164 for August. There were 234 deaths reported by hospitals, quarters and dispensaries in the Far East Command during August. Of these deaths, 194 occurred among battle casualties, 26 resulted from nonbattle injuries and 14 from disease.

Evacuation:

Tabulated below are the number of patients evacuated from the major commands to the ZI during the four-report weeks in August and the number of patients awaiting evacuation

as of 25 August 1950:

	<u>BY AIR</u>	<u>BY WATER</u>	<u>TOTAL</u>	<u>PATIENTS AWAITING EVACUATION</u>
JAPAN	1,020	31	1,051*	329
MARBO	16	1	17	7
PHILCOM(AF)	9	0	9	5
FEC	1,045	32	1,077	341

(*857 patients originated from Korea.)

Hospitalization

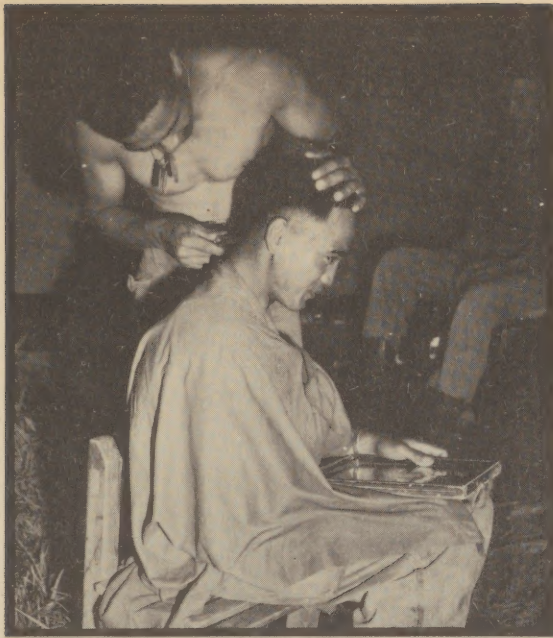
The bed status as of 25 August 1950 was as follows:

	<u>Bed Capacity</u>		<u>Operating</u>		<u>% Normal Bed</u>	<u>% of Operating</u>
	<u>Normal</u>	<u>Mobilization</u>	<u>Beds</u>	<u>Beds Occupd.</u>	<u>Capacity Occupd.</u>	<u>Beds Occupd.</u>
JAPAN	5,115	7,306	6,816	4,994	98	73
KOREA	580		1,195	399	69	33
MARBO	200	200	200	84	42	42
PHILCOM(AF)	1,919	2,439	597	393	20	66
FEC	7,814	9,945	8,808	5,870	75	67

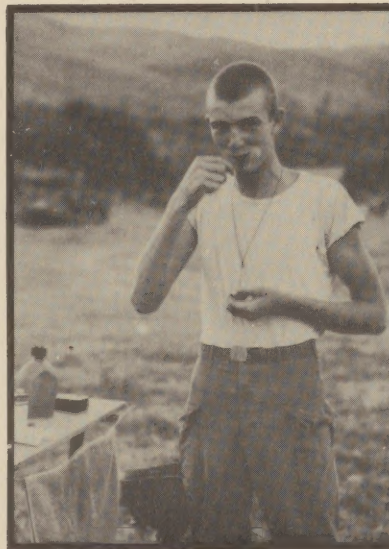
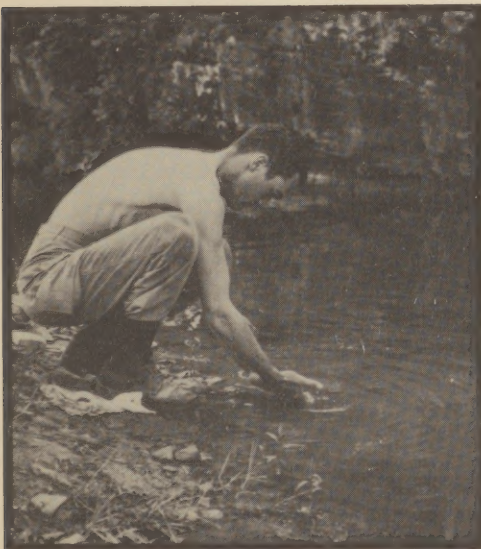
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RESTRICTED



FIELD HYGIENE
KOREA



RESTRICTED



The Chief Surgeon extends an invitation to all personnel of the Medical Department to prepare and forward, with view to publication, articles of professional or administrative nature. It is assumed that editorial privilege is granted. Copy should be forwarded so as to reach the Medical Section, GHQ, FEC, not later than the 10th of the month preceding the issue in which publishing is desired.

Major Vincent I. Hack, Editor

